155-2 THE PAST

What's Past is Prologue
W.E. Shakespeare
The Tempest

To plan effectively for the future of Rhode Island's landscape, we must understand the forces and events which shaped the present landscape. The story Rhode Island's landscape would tell of the last 350 years echoes, in microcosm, the story of the American landscape: the unyielding advance of the frontier, rout of native vegetation, unfettered exploitation of resources, supplanting of indigenous species and habitats, and despoiling of waters.

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2-1 A Prolonged Siege

Since the toppling of the first tree by Roger Williams and his followers in 1636 at the head of Narragansett Bay--a place they named Providence--humans have laid siege to Rhode Island's greenspace. The attacks have waxed and waned over time, but the campaign has been sustained and unwavering in ultimate purpose: replacement of the natural with the built, reshaping of the landscape to suit human purpose.

Rhode Islanders' changing relationship with the land has evolved through three distinct epochs--agrarian, industrial, and automotive.

2-1-1 Agrarian era

The initial agrarian assault had perhaps the most extensive, but least enduring impact. By 1767 virtually three quarters of Rhode Island's virgin forests had been felled by colonial settlers and farmers.[1] Hundreds of thousands of acres were cut or burned clear and laboriously hand-culled of their ubiquitous stones. These efforts sent the native wildlife scurrying for refuge in advance of the woodsman's axe. Some species--wolf, moose, eastern mountain lion--never returned; others--wild turkey and beaver--are only today repopulating western Rhode Island's woods.

1 Rhode Island Department of Environmental Management, Division of Forest Environment. Rhode Island Forest Legacy: Needs Assessment. 1992. p. 4.

2-1-2 Industrial era

Rhode Island's economic destiny, however, was not to lie in agriculture. Samuel Slater's Mill, built in 1790 at Pawtucket's Blackstone River falls, heralded the second epoch of our dealings with the land: the American Industrial Age. The ensuing two-century march of industrialism across the landscape forever changed the face of Rhode Island (and America). While the eclipse of farming allowed Rhode Island forests to rebound--the resilient native oak-hickory stands again covered 62 percent of the state by 1935[2] -- urbanization engendered new assaults on Rhode Island's land and water.

Falling water, source of energy for Rhode Island's fledgling industries, made the valleys of rivers and major streams the initial locus of development. As natural cataracts were few, entrepreneurs created dams and impoundments for their factories, permanently changing the free-flowing character of Rhode Island's surficial hydrology. Many waterbodies became common sewers for industrial effluvia and human waste. Such "improvements" to the natural scheme drastically altered the distribution and composition of Rhode Island's freshwater habitats, generally extinguished the anadramous fishery, and greatly diminished the diversity and abundance of its original aquatic wildlife.

By the mid-nineteenth century, new tools--steam power, bricks and mortar, iron and steel--came into full play, fueling our ability to rearrange nature on a faster, bigger, and more permanent scale. As Rhode Island gained dominance in textiles, machine tools, and other manufactures, vast industrial complexes crowded the banks of the Blackstone, Pawtuxet, Woonasquatucket, and Moshassuck rivers. To provide room for expansion of commerce, the railroads, and shipping, Providence's Great Salt Cove, many of the expansive salt marshes and tidal flats along the upper Bay shore, and swamps and fens along major rivers were filled in. Eventually, Rhode Island would come to lose much of its original wetlands legacy--up to half of its productive salt marshes[3]--before they were afforded any protection.

The indignities visited directly upon the rivers flowing into Narragansett Bay were notorious. Sewage from the growing population in cities at the head of the bay went, untreated, directly into its waters. Providence's Moshassuck Canal was described in 1854 as "foul smelling with hogs, dogs and cats [floating] in the water and large quantities of gas arising from decaying substances[4]. Six million gallons of manufacturing wastes and 50,000 pounds of grease were found by an 1895 report to be the *daily* burden dumped by industries into the Providence River[5]. Such exploitation and neglect diminished the richness and diversity of life in large portions of Narragansett Bay.

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2 Ibid.

3 R.I. Division of Planning and R.I. Department of Environmental Management. Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan. 1992. 3.38.

4 Snow, E. Statistics on Causes of Asiatic Cholera. 1855. cited in Olsen, S., Robadue, D., and Lee, V. An Interpretative Atlas of Narragansett Bay. University of Rhode Island Coastal Resources Center Marine Bulletin 40. 1980. p. 40

5 Ibid.

Our three centuries of war against the land were not devoid of "counterattacks". Occasionally, the land fought back with cataclysms illuminating the folly of our transgressions: a water pollution-induced cholera epidemic in the 1850s; floods and hurricanes, erasing in an afternoon, decades of building on shifting sands and soggy soil; the collapse of oystering in the Bay, a once bountiful resource and source of livelihood, extinguished by one short generation of mismanagement and pollution. But mostly, greenspace played the victim.

2-1-3 Automotive era

The twentieth century brought the automobile, and the ribbons of asphalt and concrete highways we unfurled across the land before it. Rather than solving the festering problems of overcrowded cities, the auto provided the means to escape them. The cities were no longer the focus of our landscape rearrangement; indeed we ultimately came to abandon many of the ambitions we once held out for their beautification and betterment. Instead, as barriers of time and distance fell, we cast our space-hungry gaze farther into the hinterland.

The mobility our cars granted, however, came at high cost to greenspace: a greatly "democraticized" distribution of pollution and land degradation. More cars, more buildings, and more pavement spread over more and more of the landscape, meant more destruction and displacement of plant and animal communities, more polluted runoff flowing into waterbodies, and less greenspace.

In Rhode Island, the fruits of decentralization were subdivisions and shopping centers spilling outward from Providence, down the Post Road, and Route 2; creeping up Aquidneck Island from Newport; and climbing the walls of the Blackstone and Pawtuxet Valleys. Small coastal towns shed their traditional role of summer colony and blossomed into year-round communities, acquiring in process all the accoutrements--shopping centers, office/industrial parks--and many of the problems--pollution, traffic--of modern suburbs. Mill villages and farms forgotten by time for a half century found themselves engulfed in a sea of much newer developments, which often dwarfed their scale and mocked their heritage.

A marked economic downturn, followed by inflation and high interest rates, slackened development pressures in Rhode Island throughout the 1970s, but left untouched the desire burning in many Rhode Island families to escape the cities and the older inner suburbs for bigger homes with better views. By the 1980s, the stage was set for an explosion (see box, page 2.4). The centrifugal diffusion would approach its end game as "escapees" from metropolitan Providence ran headlong into refugees from Boston and Hartford. To those seeking escape, "The City" encompassed, figuratively and quite nearly literally, all within the 30-odd mile belt Interstate 295 wraps around Providence.

By 1985, all of Rhode Island's landscape fell within the range of comfortable commutation. Affordable cars and good roads allowed more Rhode Islanders than ever before to enjoy the good life in the country or idyllic setting of a house by the sea. As they moved to such settings, they brought with them new, insidious, threats to the natural and cultural treasures of greenspace: nitrates leaching invisibly from thousands of septic tanks to overpower the natural cleansing capacities of a waterbody or aquifer; tens of thousands of vehicle trips (and countless millions of

crankcase drips) shuttling at breakneck speed along roads laid out for horseback travel; century-old farms raising new crops of three-bedroom ranches or office buildings.

Wake up call

For a few remarkable years in the 1980s Rhode Island was a boomtown. Real estate, development, and construction drove the state's "go go" economy for five frenetic years. Fortunes, legitimate and fraudulant, were made in real estate in those few short years. When the growth bubble burst, it left a shattered banking system and economy, a bill an entire generation of honest, hard-working Rhode Islanders will pay, and a state's faith in its institutions profoundly shaken.

In the aftermath much effort has been expended to dissect the *who, what, where, how and why* of the development boom and bust, but available data tell little of the boom's impact on the landscape. Statistics reveal, for instance, that commercial construction surged from $44 million in 1981 to $95 million in 1987, or that new housing unit permits jumped from 2,400 in 1982 to over 7,000 in 1987. The acres of forest felled, wetland infringed, shoreline walled off, or farmland paved were not so dutifully counted as the wave of growth swept across the state

But as the boom proceeded, Rhode Islanders knew that their landscape was paying dearly. Across the breadth and depth of the state, they saw an all too tangible "downside" of growth as bulldozers disrupted the peace of their neighborhoods, and open spaces near and dear to their hearts and souls--farms, woodlands, historic structures--disappeared forever. Driven by rampant speculation, development of hithertofore marginal land was pursued in earnest. Open spaces long skipped over as the cities and suburbs grew, suddenly were the venue for proposed house lots, condominiums, and shopping centers.

While the sheer magnitude of the growth shocked Rhode Island to reality, perhaps the most chilling feature of the boom was the ubiquitousness and seeming incoherence of what was being built. Development of some fashion was happening literally in every corner of the state, frequently without discernible regard for sensitive resources, or respect for time-honored, traditional patterns and scales of community organization. Many of the developments bore little relationship to needs of communities affected--some, unmarketable for years after they were built, bore scant relationship to economic reality. To many longtime residents, the pace and scale of landscape change was unprecedented and frightening:Rhode Island was becoming California, in a development sense, before their very eyes.

The dramaticperiod proved a rude awakening to the vulnerability of gre changes to Rhode Island's landscape witnessed in such a short enspaces so many Rhode Islanders treasured. Lulled by the sluggish growth of the seventies and early eighties, many had grown accustomed to think that the view out their back windows would never change...that the woods at the end of the block would always be there. The naivete that remoteness conferred immunity from change was just one of many public innocences lost in the 80s.

Lessons of the 80s

The 80s are now history. The boom seems a distant, receding memory; while the *morning-after* effects of the bust linger still. What did we learn? What lessons can we carry forward as we rebuild our economy, heal our landscape, and regain our confidence?

We learned that our plans and programs were not neutral; they proved to be decidedly pro-growth, and the protections they professed for open space were weaker than we had thought. A graver fault was that our plans lacked a definitive vision for the landscape. We found, too late in many cases, that it was not enough to rely upon the wisdom of the market to decide exactly how and when land would be developed. In our desire to embrace the benefits of growth, we had failed to specify the kind of growth we wanted, when we wanted it, and to detail how it should properly relate to the land.

We learned the price of neglecting regular programmed investment in greenspace. Slow growth, tight budgets, and federal cutbacks had brought investments in local recreation and open space system expansions virtually to a standstill in the late 70s and early 80s. When the boom came, communities discovered their open space acquisition programs at low ebb at precisely the time when burgeoning growth both spurred public demand for greenspace and threatened critical lands.

Finally, Rhode Island learned a lot about the passionate love our people have for their land and water. Recoiling as they took measure of the toll development was exacting on the landscape, citizens mobilized in opposition to projects threatening their special open spaces. Soon, a groundswell of concerned citizens were clamoring for government action to protect open space. Watching their landscape devoured and heritage erased, on three occasions, Rhode Islanders dug deep into their pockets to finance over $130 million in State and local borrowing for open space and recreation. Over five years, nearly 10,000 acres--historic farms, beloved beaches, urban playgrounds--were purchased. Because we had waited until the crisis was upon us, however, many crucial sites demanded a peak price; but the cost if they had been lost would have been far higher still.

History will record the 1980s as a watershed for Rhode Island's landscape. Rhode Island was, as its autotag slogan invited for decades, "discovered" in the 80s: by Boston-bound commuters, by tourists, by out-of-state developers, by national retailers, by global industries. While the decade's stratospheric growth rates are unlikely to be repeated soon, the pressures of growth on the land will surely return as prosperity again takes root.

The eighties gave us a foretaste of the destiny which economics and inertia alone hold for Rhode Island's landscape. Armed with this revelation, the challenge falls now to a weary citizenry to bring forth a better fate for the land they love.

2-2 Countertrend

Throughout the long story of our landscape one principle was dominant: land's worth lay solely in its utility to our immediate, principally economic, purposes. Our belief systems--religion, economics, science--all reassured our smug dominion over the earth and counseled that its bounty was put here for our purpose, our productivity, our manipulation. Land and water were taken for granted: there in ample quantity for the taking, and we generally took them without a thought to consequences.

But, against the predominant theme of a landscape besieged, a countertrend of preservation is interposed through the story of Rhode Island's greenspace. While not pervasive enough to constitute a "land ethic," periodic attempts to reconcile our immediate demands on the land with its abilities and with the needs of the future are also recorded. On distinct, and long separated, occasions the urge to preserve rose to the fore as Rhode Islanders, motivated by crisis, necessity, noble instinct, desire to be memorialized, unique opportunity, or some combination, decisively acted to reserve critical lands and waters for public use and for posterity.

2-2-1 Early public spaces

The beginnings were small: tiny parcels donated or set aside as "commons" and public parks in the 1700s in Providence and Newport. It was not until the late 1800s, as industrialization and immigration choked the cities with people and pollution, that the idea of a "public estate" (reserving land for public recreation, to improve the environment and aesthetics of the cities, or to protect key resources) gained wider acceptance. As late as 1872, Providence city fathers expressed reservations over accepting Betsy Williams' donation of the 100 acre Williams family farm for public recreation, because it extended beyond the southern boundary of the city and was removed from built-up areas[6]. (Eventually accepted, the Williams' donation grew into the 400 plus acre Roger Willams Park--an acknowledged jewel of modern metropolitan Providence.)

6 R.I. Historical Preservation Commission. Providence: A Citywide Survey of Historic Resources. 1986. p. 178.

2-2-2 Planning of public park systems

A significant advance came at the close of the nineteenth century--one hundred years ago. Inspired by the 1883 Chicago Exposition and the City Beautiful movement it spawned, Providence joined other American cities in planning a regional-scale public park system as an escape for residents of overcrowded neighborhoods. In Providence, a voluntary group--the Public Park Association--was formed in 1883 to advocate preserving greenspace for public usage. The City created a Board of Park Commissioners in 1901, and by 1910 it oversaw 31 parks covering 640 acres.

On a broader scale, the General Assembly of Rhode Island formed the Metropolitan Park Commission in 1903 to plan a park system encompassing all the environs of Providence. With $550,000 authorized by state voters in 1906 and 1912, the Commission pursued a grand scheme of parks, boulevards, and public reservations (see Figure 155-2(1). By 1933, the jurisdiction of the Commission had been broadened to encompass the entire state, and it had acquired 34 reservations containing over 4,300 acres. While the entire plan was never fully realized, the elements of the Commission's plan that were implemented constitute an important fraction of the public open space of modern-day greater Providence. The work of the Commission also laid the foundation for the present-day state park system. Sadly, while the state system continued to grow, efforts at broad-scale system-wide planning evidenced by the Metropolitan Commission's grand plan waned.

The first grand scheme for greenspace and greenways in Rhode Island was produced nearly 100 years ago by the Metropolitan Park Commission. Parts of the plan that were implemented give Providence much of its present day supply of greenspace.

Figure 155-2(1)
Rhode Island's First Grand Greenway Plan

2-2-3 Watershed land

The necessity of supplying pure water for growing urban populations provided a second impetus for publicly-preserved greenspace. As their local water sources were overtaxed or polluted by encroaching development, several of Rhode Island's growing cities looked to the hinterland for water. In 1885-6 the City of Pawtucket acquired land at Diamond Hill in northern Cumberland for its reservoir. Between 1915 and 1926, the City of Providence bought and condemned over 23 square miles of land on the north branch of the Pawtuxet River and relocated residents of five villages to create the Scituate Reservoir.

Today, the Scituate watershed is a 13,000-acre preserve on the fringe of metropolitan Providence. A veritable wilderness, it provides much more than the pristine water it was established to ensure. Other Rhode Island communities that have developed water supply reservoirs, and protected greenspace in the process, include Woonsocket, Newport, East Providence (since abandoned as primary supply), Jamestown, and the Bristol County communities.

What We've Saved

Rhode Islanders, over the last 350 years, have saved about 13 percent of the state's land area as preserved greenspace (see map). This estimate, derived from the R.I. Recreation, Conservation and Open Space Inventory, includes a public estate (federal, state, and local) of about 80,000 acres (just under 12 percent of the state's area), and about 7,000 private conservation acres that can be considered securely protected (1 percent).

More important than quantity is the quality of what we've set aside. What we've saved includes places of outstanding scenic wonder.... Clay Head Cliffs, Goosewing Beach, Beavertail Point; irreplaceable natural treasures...Trustom Pond, Seapowet Marsh, Great Swamp; commemorations of the state's industrial and ethnic heritage...Blackstone River Corridor, Cliff Walk, Trestle Trail; critical resource lands..Scituate Reservoir, Arcadia, Cottrell Farm; and places where generations of Rhode Islanders have gone for family outings....Goddard Park, Scarborough Beach, Roger Williams Park. These places are now secure--solid ground in an increasingly fragmented and shifting landscape.

2-2-4 Federal property transfers

Some greenspace preservation resulted from unique opportunities. Sizable tracts in western Rhode Island were set aside in the Depression Era as federal camps under the Civilian Conservation Corps program. These holdings were later turned over to the state, becoming extensive management areas in the state woodlands system.

A similar opportunity was capitalized upon in the early 1970s when the U.S. Navy closed and abandoned a number of its fortifications and munitions depots on islands in Narragansett Bay. After considerable effort, nearly 2,000 acres of this former military land was deeded to Rhode Island to create the Bay Islands Park System.

2-2-5 Recent land acquistion programs

Federal social and environmental programs of the 1960s and 1970s brought a major push to provide green space for public use. Rhode Island, like other states, took advantage of the Land and Water Conservation Fund Program, which underwrites 50 percent of eligible open space purchases and recreation facility development; the Pittman-Robertson Act, which provides funding for wildlife habitat acquisition; the Dingell-Johnson/Breaux-Wallop program, which funds fisheries habitat protection and restoration; and the Coastal Zone Management Act, which funds estuarine sanctuaries and coastal land purchases, to preserve many important greenspaces. Direct federal acquisition also played a role: about 1,200 acres have been acquired along Rhode Island's coast as National Wildlife Refuges.

Funding under most of these programs dwindled to a trickle during the 1980s; but while they were at their heyday, Rhode Island used their resources to support a major expansion of its protected greenspace. Federal acquisition programs, combined with state funds under the Green Acres and reservoir land acquisition bonds of the 1960s and the Open Space bonds of the 1980s, allowed Rhode Island's public open space to grow from around 50,000 acres in the early 1960s to approximately 80,000 acres today.

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